

2/6/01

(1)

# "Contact Potential Ionization Battery"

Concept:

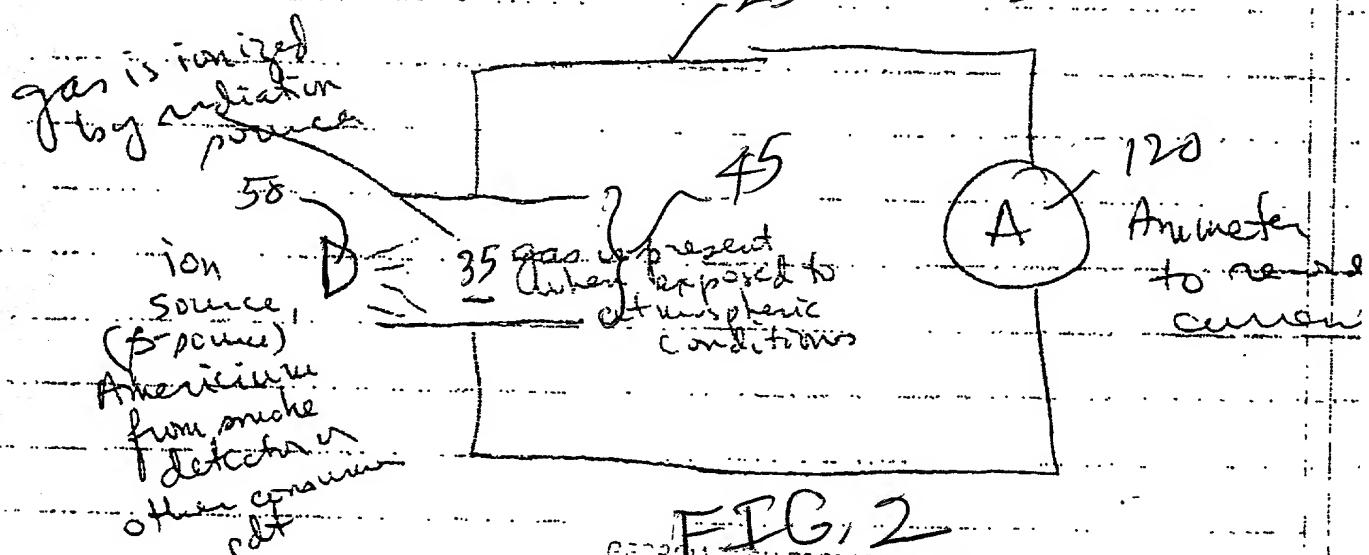
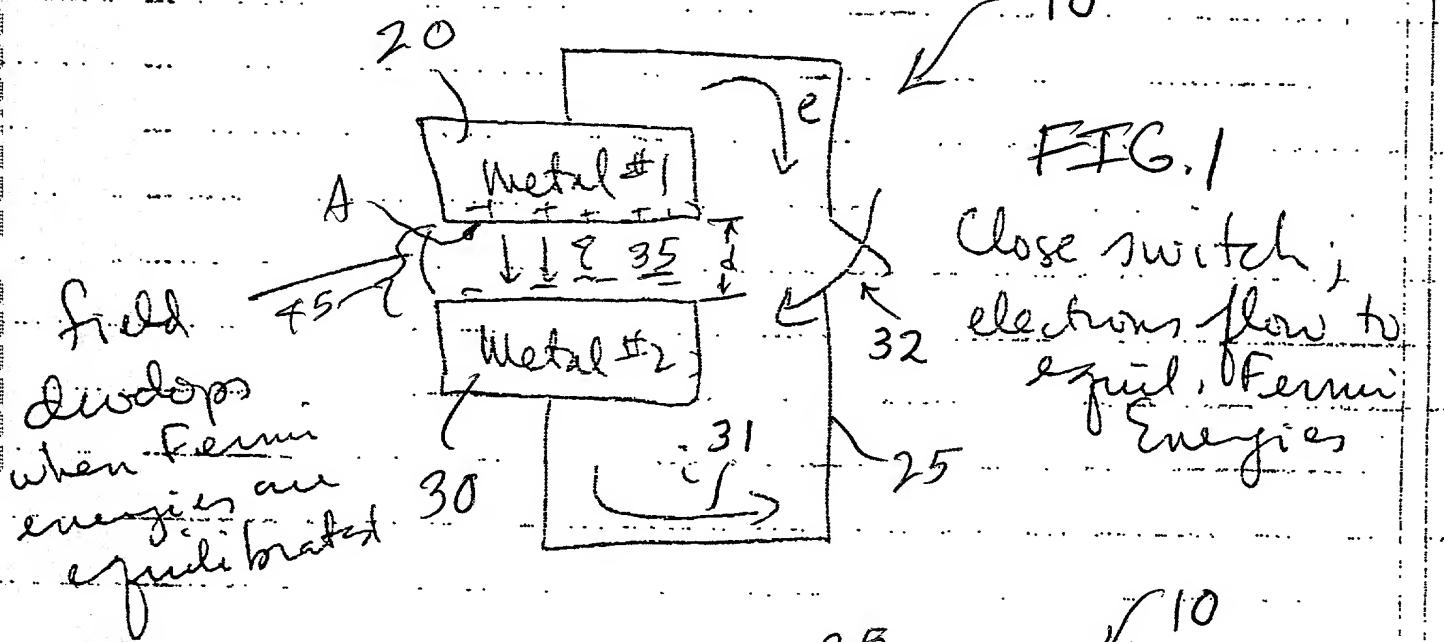


FIG. 2  
GEORGIA TECH RESEARCH CORPORATION  
FEBRUARY 6, 2001

(2)

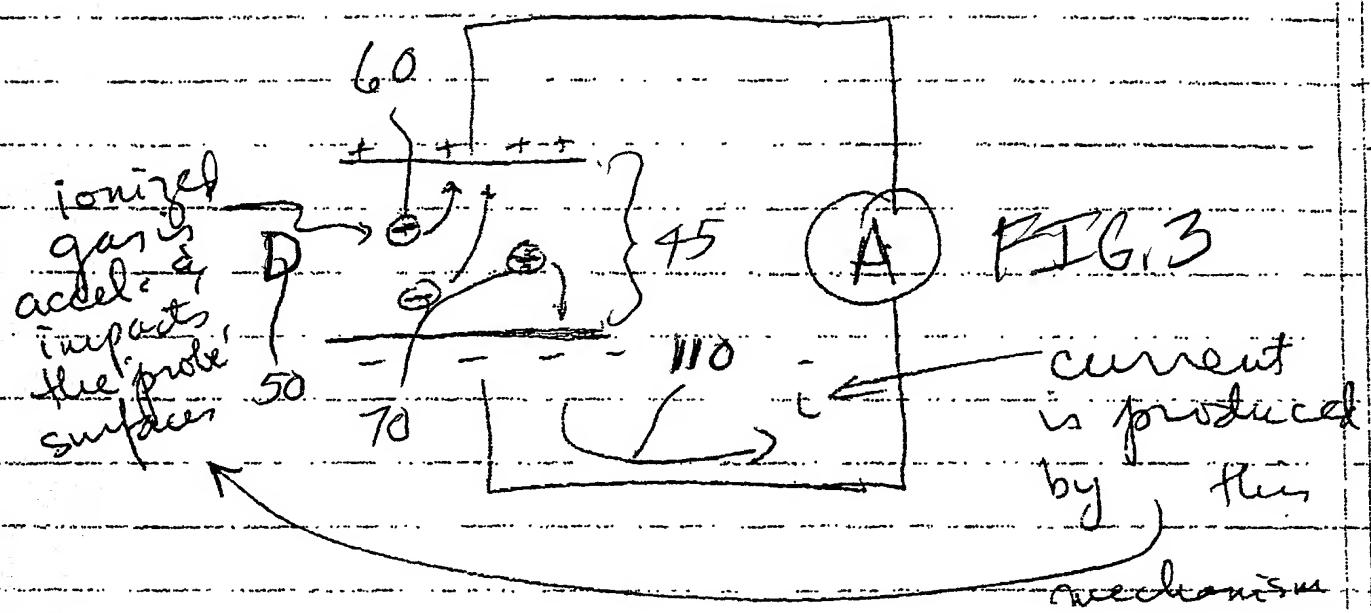


FIG. 3

current  
is produced

by this

mechanism

{ ionization  
rate

$$i \propto (\eta)(\Delta\phi) \text{ (size of the probe)}$$

Work function  
difference

(f)

detail: If increases with pressure,  
temperature, type of  
gas, work function  
value(magnitude)

(2)

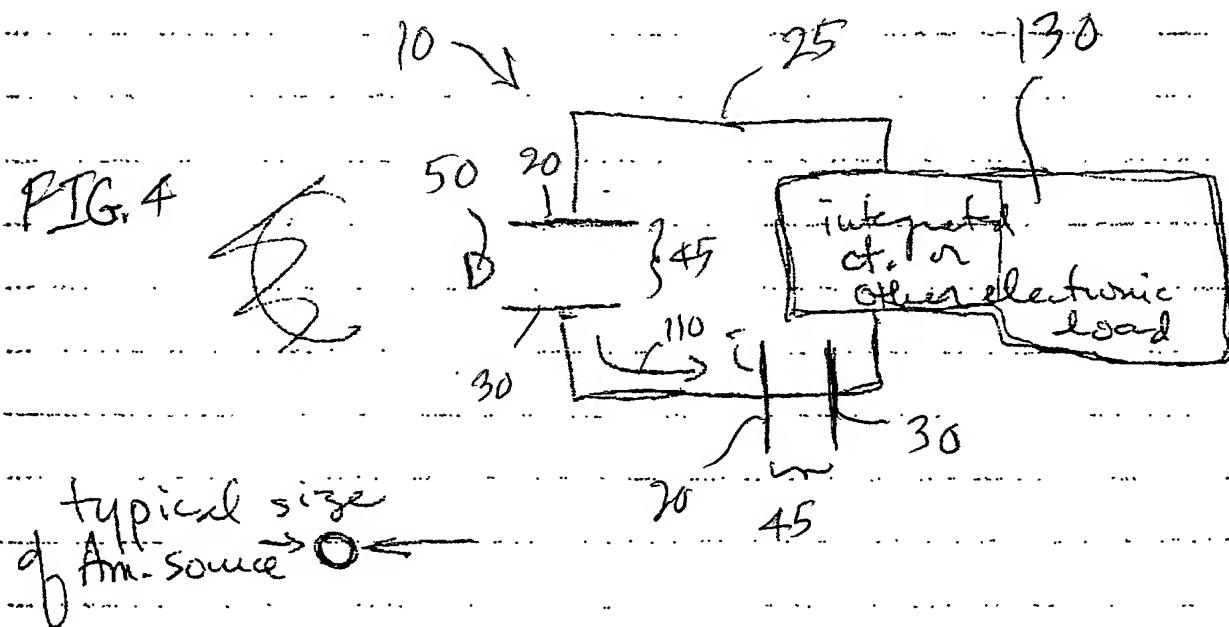
Current is perpetual  
as long as gas is  
present and radiation  
source is present.

(3.)

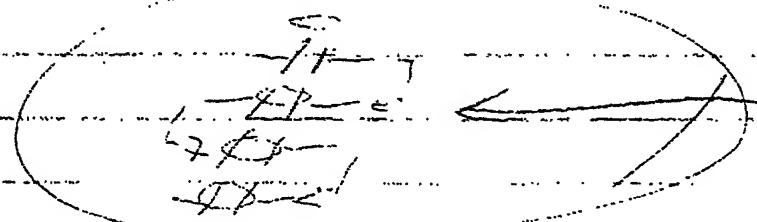
3. Current  $\sim 10^{-8}$  -  $10^{-9} \text{ A}$   
(of that order)

Therefore this current is  
avail. to drive other elect.  
devices

FIG. 4



4. Can integrate battery into  
silicon wafer



can stack  
in series  
to increase  
the current